### PATENT COOPERATION TREATY

## **PCT**

# TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant 44 (	_	at's file reference	ce	FOR FURTHER A	CTION	See Form I	РСТ/ІРЕА/416
Internation	onal applic	cation No.		International filing da	te (day/month/year	Priority dat	te (day/month/year)
PCT/	/EP20	04/0119	904	21.10.200	4	21.10	0.2003
Internation	onal Paten	t Classification	(IPC) or natio	onal classification and	IPC		
B23F	K20/1	.0, в061	B3/00				
Applicant	ıt						
		LTRASCI	HALLTEC	CHNIK GMBH			
1.	_			ninary examination rep e applicant according to		this International	Preliminary Examining Authority
2.	This REF	PORT consists	of a total of	5	sheets, in	cluding this cover s	sheet.
3.	This repo	ort is also accor	npanied by Al	NNEXES, comprising:			
	a. 🔀	(sent to the d	applicant and	to the International Bu	reau) a total of	1	sheets, as follows:
							are the basis for this report and/or
		sheets Instruc	_	etifications authorized	by this Authority (:	see Rule 70.16 and	Section 607 of the Administrative
		the dis	-			-	n an amendment that goes beyond f Box No. I and the Supplemental
	. $\Box$	Box.					
	b	(sent to the l	International I	Bureau only) a total of	(indicate type and i	number of electroni	.c carrier(s))
	_						ng a sequence listing and/or tables
				readable form only, a rative Instructions).	s indicated in the S	Supplemental Box	Relating to Sequence Listing (see
4.	This repo	ort contains ind	ications relatio	ng to the following iten	ns:		
	$\square$	Box No. I	Basis of the	report			
		Box No. II	Priority				
		Box No. III	Non-establis	shment of opinion with	regard to novelty,	inventive step and i	industrial applicability
		Box No. IV	Lack of unit	y of invention			
	M B	Box No. V		atement under Article i Lexplanations supporti		o novelty, inventive	e step or industrial applicability;
		Box No. VI	Certain docu	aments cited			
		Box No. VII	Certain defe	cts in the international	application		
	∑ E	Box No. VIII	Certain obse	ervations on the interna	tional application		
Data of a		of the demand				n of this vaport	
Date of St	ионцssion	or me demand	1		Date of completion	n or uns report	
Name and	d mailing	address of the	IPEA/EP		Authorized officer		
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### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/011904

Box	No. I	Basis of the report		
1.		h regard to the language, this report is based on the internation cated under this item.	onal application in the language in	which it was filed, unless otherwise
		This report is based on translations from the original language which is the language of a translation furnished for the purpose.		,
		international search (Rule 12.3 and 23.1(b))		
		publication of the international application (Rule 12.4		
2	With	international preliminary examination (Rule 55.2 and by regard to the <b>elements</b> of the international application, this		sheets which have been furnished to the
2.	rece	iving Office in response to an invitation under Article 14 ar report):		
		the international application as originally filed/furnished		
	$\bowtie$	the description:		
		pages 4-7		as originally filed/furnished 12.07.2005 with letter
		pages* 1,2,2a,3	received by this Authority on	
		pages*	received by this Authority on	
	$\boxtimes$	the claims:		
		nos.		as originally filed/furnished
		nos.*	as amended (togethe	r with any statement) under Article 19
		nos.* _1,3-13	received by this Authority on	18.04.2005 with telefax
		nos.*	received by this Authority on	
	$\boxtimes$	the drawings:		
		sheets 1,2		as originally filed/furnished
		sheets*		
		sheets*	received by this Authority on	
		a sequence listing and/or any related table(s) – see Supplem		
3.		The amendments have resulted in the cancellation of:		
		the description, pages		
		the claims, nos.		
		the drawings, sheets/figs		
		the sequence listing (specify):		
		any table(s) related to sequence listing (specify):		
4.		This report has been established as if (some of) the amend they have been considered to go beyond the disclosure as fi		
		the description, pages		
		the claims, nos.		
		the drawings, sheets/figs		
		the sequence listing (specify):		
		any table(s) related to sequence listing (specify):		
*	If ite	em 4 applies, some or all of those sheets may be marked "sup	erseded."	

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Box	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
1.	Statement				
	Novelty (N)	Claims	1, 3-13	YES	
		Claims		_ NO	
	Inventive step	p (IS) Claims	1, 3-13	YES	
		Claims		_ NO	
	Industrial app	olicability (IA) Claims	1, 3-13	_ YES	
		Claims		_ NO	
2	Citatiana and an	ala matica a (Dada 70.7)			

- 2. Citations and explanations (Rule 70.7)
  - 1. Documents cited

Reference is made to the following documents:

- D1: FR-A-1 464 551 (GULTON INDUSTRIES, INC) 6 January 1967 (1967-01-06)
- D2: WO 02/43915 A (SCHUNK ULTRASCHALLTECHNIK GMBH; E. STEINER ET AL)
  6 June 2002 (2002-06-06)
- D3: US-A-4 074 152 (K. ASAI ET AL) 14 February 1978 (1978-02-14).
- 2. Claims 1 and 3-13

Document D2, considered to be the closest prior art, discloses (see in particular figure 5) a tool (12) for an ultrasound welding device (abstract; figure 1), from which the subject matter of claim 1 differs by virtue of the features defined in the characterising part of said claim.

The problem addressed by the present invention can consequently be regarded as that of devising an

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

improved tool for an ultrasound welding device in order to reduce the deflection of the at least one working surface.

The solution to the above problem, as proposed in claim 1 of the present application, involves an inventive step (PCT Article 33(3)). The reasons are as follows:

a- D2 makes no provision for modifications to the end face of the sonotrode or sonotrode head. D1 relates to an ultrasound welding device, with which bending vibrations are to be produced. The sonotrode described in D1 has no reinforcement and no end face. D3 relates to an ultrasound exciter for vaporising a fluid. D3 discloses nothing to indicate an element excited into ultrasonic oscillation for influencing the motion of a reinforced work surface. The function of the projection is to connect a form-fitting connection to an ultrasonic oscillation amplitude booster.

Claims 3-13 are dependent on claim 1 and, in consequence, likewise satisfy the requirements of the PCT in respect of novelty and inventive step (PCT Article 33(2) and (3)).

#### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
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	Box No. VIII	Certain observations on the international :	application
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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1. Since a combined reference to multiple preceding claims (PCT Rule 6.4(a)) is inadmissible, the expression "at least" in claims 4-13 should be deleted.